
EXECUTIVE SUMMARY

Context

The City of Longmont engaged Muller Engineering to conduct traffic analysis of two at-grade railroad crossing locations: Emery Street north of 1st Avenue and Boston Avenue west of Pratt Parkway. Emery Street is an existing at-grade crossing while Boston Avenue is a potential at-grade crossing location. The City has a desire for a new crossing at Boston Avenue in order to provide additional east/west connectivity as an alternative to 3rd Avenue or Ken Pratt Boulevard. The redevelopment of the 150 Main property (former Butterball Site), has triggered the need for improvement to the existing Emery Street at-grade crossing.

The estimated costs to improve the existing Emery Street crossing exceed the amount of funding available for the project. Therefore, staff requested an evaluation of the impacts to traffic operations in the area if the Emery Street crossing was to be closed. The task of this analysis is to evaluate the benefits of the crossings along Emery Street and Boston Avenue.

Scenarios

The City of Longmont requested several scenarios be analyzed to assess the utility of the existing Emery Street at-grade crossing compared to a potential Boston Avenue at-grade crossing. The scenarios cover multiple forecast years and varying crossing conditions on Emery Street and Boston Avenue. Each scenario was analyzed for both the AM and PM peak hours. The scenarios are discussed in detail in the report.

Operations Analysis

AM and PM peak hour traffic operations were analyzed for each of the identified scenarios using Synchro 9 traffic analysis software. For the five study intersections, average delay per vehicle, intersection level of service (LOS) and the maximum volume to capacity ratio (v/c) for the worst performing movement were calculated. In addition, for the 2040 conditions where a Boston Avenue railroad crossing is provided, peak hour and daily volume analysis on Ken Pratt Boulevard, 3rd Avenue and Boston Avenue was conducted in order to estimate benefits to parallel corridors by providing the Boston Avenue crossing location.

Summary and Recommendations

The analysis of the Emery Street and Boston Avenue railroad crossings demonstrates that both crossings provide a level of utility to the Longmont Roadway network. In general, the Emery Street crossing helps to distribute traffic on 1st, 2nd and 3rd Avenues, while providing a north-south connection parallel to Main Street. In addition, the crossing provides a pedestrian and bicycle connection parallel to Main Street.

The Boston Avenue crossing provides another east/west cross city connection as an alternative to 3rd Avenue or Ken Pratt Boulevard. Based on the analysis of eight scenarios for the years 2017, 2018, 2020 and 2040, each crossing location provides localized traffic improvements.

Maintain Emery Street Crossing

- Improves traffic operations at the 2nd Avenue/Main Street and 1st Avenue/Martin Street intersections.
- Provides a pedestrian and bicycle connection parallel to Main Street, which will ultimately be extended south to Boston Avenue.
- Emery Street crossing closure increases traffic volumes on 2nd Avenue at Main Street. Drivers would utilize Main Street to cross the railroad corridor under this scenario. The traffic volumes on 2nd Avenue increase to a point that 2nd Avenue operates over capacity at Main Street.

Given that closing the Emery Street crossing degrades the existing roadway network and creates a barrier for pedestrian and bicyclists it is recommended that the Emery Street crossing be maintained.

Open Boston Avenue Crossing

- Improves traffic operations at the 3rd Avenue/Main Street and 1st Avenue/Main Street intersections resulting from re-routing of existing traffic to use new at-grade crossing.
- Shifts some traffic from 3rd Avenue to the Boston Avenue corridor and provide localized operational improvements.